DRIVER DROWSINESS DETECTION

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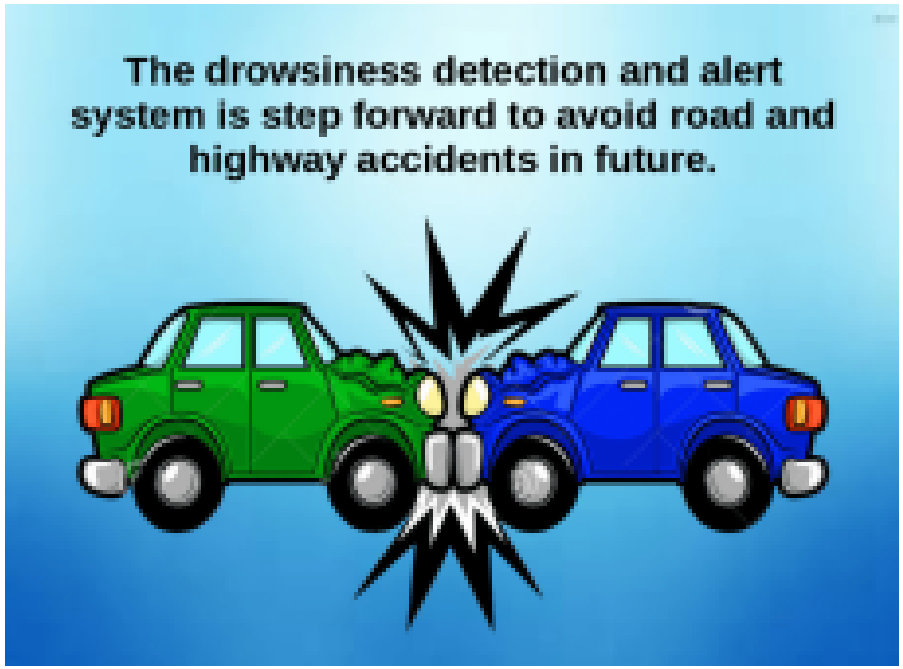
22 May 2021

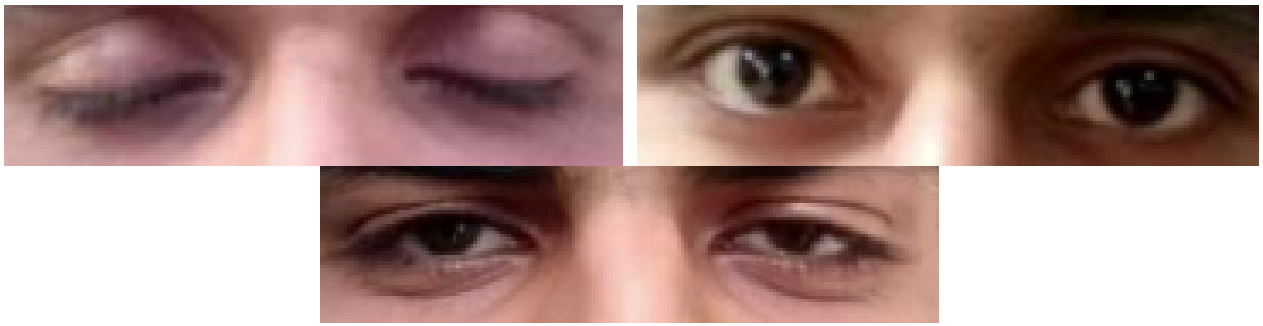
Introduction

- More than 30% road accidents are due to driver's sleepiness or fatigue
- Drowsiness detection is a safety technology that can prevent accidents that are caused by drivers who fell asleep while driving.



Project Description

- The objective of this project is to build a drowsiness detection system that will detect that a person's eyes are closed for a few seconds. This system will alert the driver when drowsiness is detected.



Algorithm

- Take input from webcam.
- Detect the face and create a Region of Interest.
- Detect the eyes from ROI and feed it to the classifier.
- Classifier will categorize whether eyes are open or closed.
- If eyes are closed for a longer time, produce the alarm sound.

Tech Stack

- PyCharm
- Python 3.9.5
- LaTeX
- GitLab

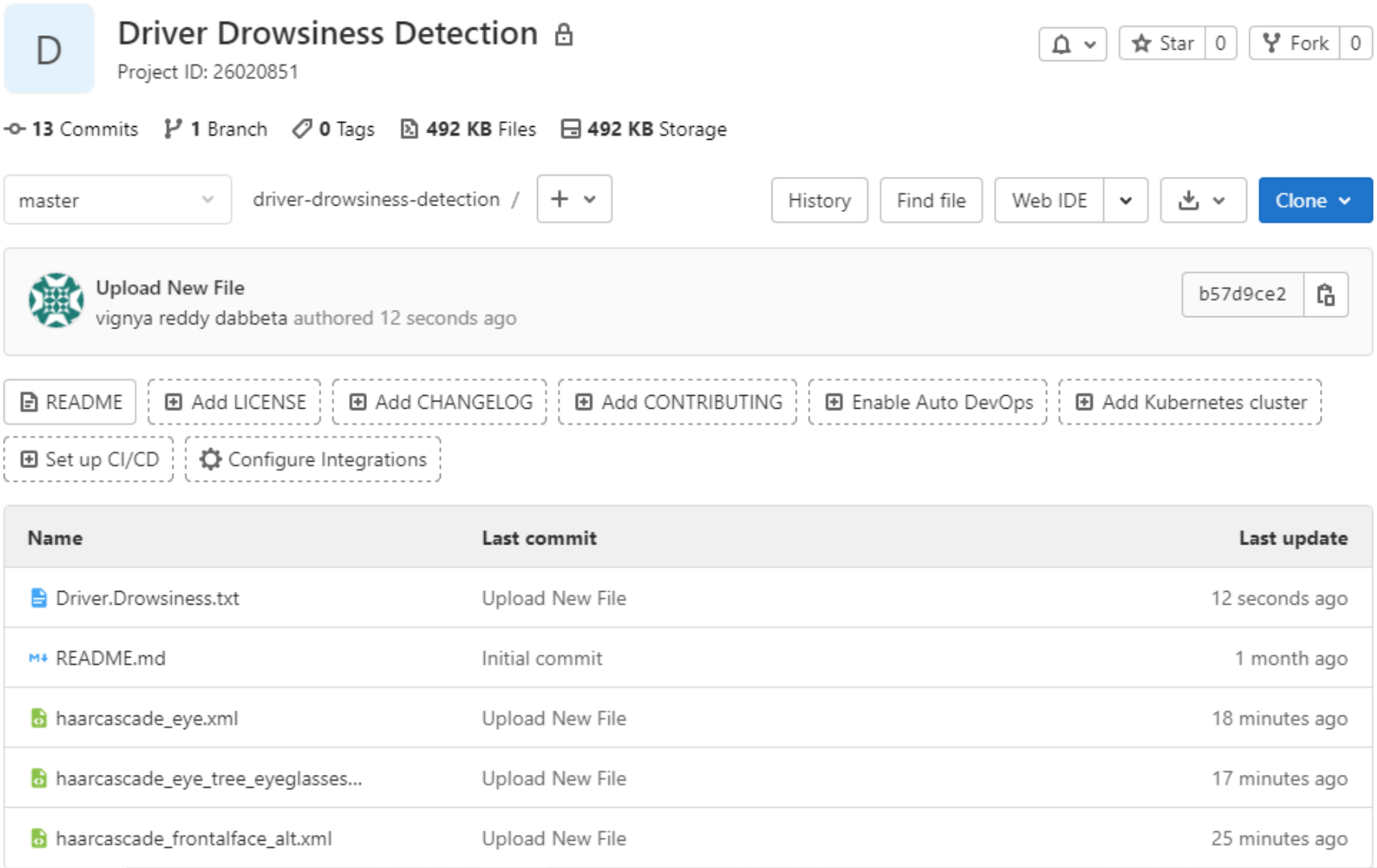
Learnings

- Open CV
- Pygame

Challenges

- Capturing face and eye characteristics from unwanted movements.
- Generation of alarm sound for opened eyes.

Gitlab


D
Driver Drowsiness Detection
Project ID: 26020851
Star 0
Fork 0
13 Commits
1 Branch
0 Tags
492 KB Files
492 KB Storage
master
driver-drowsiness-detection /
History
Find file
Web IDE
Clone
Upload New File
vignya reddy dabbeta authored 12 seconds ago
b57d9ce2
README
Add LICENSE
Add CHANGELOG
Add CONTRIBUTING
Enable Auto DevOps
Add Kubernetes cluster
Set up CI/CD
Configure Integrations
Name
Last commit
Last update
Driver.Drowsiness.txt
Upload New File
12 seconds ago
README.md
Initial commit
1 month ago
haarcascade_eye.xml
Upload New File
18 minutes ago
haarcascade_eye_tree_eyeglasses...
Upload New File
17 minutes ago
haarcascade_frontalface_alt.xml
Upload New File
25 minutes ago

References

- https://docs.opencv.org/master/d9/df8/tutorialroot.html
- https://www.researchgate.net/SystemsforDetectingDriverDrowsiness
- https://github.com/opencv/opencv/blob/master/data/haarcascades

THANK YOU